

IN THE CLAIMS

Kindly cancel claim 13, without prejudice, and amend claims 1, 5-10 and 12 as shown in the following claim listing:

1.(currently amended) A method of operating a packet data transmission system ~~comprising~~ having a primary station (PS 1) having a plurality of antennas (PA1 - PA4) and at least one secondary station (SS1) having a plurality of antennas (SA1 - SA4); the method comprising the primary station (PS1) transmitting packet data on signal paths between pairs of primary and secondary station antennas, the secondary station (SS1) monitoring its radio environment and sending information about its radio environment to the primary station, the primary station (PS1) in response to this information adapting itself and the secondary station (SS1) configuring its receiver resources (RX1 - RX4) for processing the received data and interference by using some of the receiver resources designed to receive transmissions for the purpose of interference cancellation and by choosing selected ones of said plurality of its antennas (SA1-SA4).

2.(original) A method as claimed in claim 1, characterised in that the secondary station (SS1) recommends to the primary station (PS 1) how it should adapt itself.

3.(original) A method as claimed in claim 2, characterised in that the secondary station (SS1) recommends that the primary station (PS 1) use a particular subset of antennas for transmitting packet data.

4.(original) A method as claimed in claim 2 or 3, characterised in that the secondary station (SS 1) recommends the maximum desired number of receivable transmission antennas to be used by the primary station (PS 1).

5.(currently amended) A method as claimed in ~~any one of~~  
~~claims 2 to 4~~ claim 2 or 3, characterised in that the secondary  
station (SS 1) recommends the transmission format to be used by  
the primary station (PS1).

6.(currently amended) A method as claimed in ~~any one of~~  
~~claims 2 to 5~~ claim 2 or 3, characterised in that the primary  
station (PS1) adapts itself as recommended by the secondary  
station (SS1).

7.(currently amended) A method as claimed in ~~any one of~~  
~~claims 1 to 6~~ claim 1, 2 or 3, characterised in that the secondary  
station (SS1) determines the resources to be used for receiving  
packet data and the resources to be used for interference  
suppression.

8.(currently amended) A method as claimed in ~~any one of~~  
~~claims 1 to 7~~ claim 1, 2 or 3, characterised in that the secondary  
station (SS1) monitors the transfer function of the paths between  
the primary and secondary stations antennas (PA1 - PA4, SA1 -  
SA4).

9.(currently amended) A method as claimed in ~~any one of~~  
~~claims 1 to 8~~ claim 1, 2 or 3, characterised in that the  
information about the radio environment of the secondary station  
(SS1) includes characteristics of the interference present at one  
or more antennas (SA1-SA4) of the secondary station (SS1).

10.(currently amended) A packet data transmission system  
comprising:

a primary station (PS1) having a plurality of antennas (PA1 -  
PA4), signal transmitting (TX1 - TX4) and receiving means (16) and  
means for adapting itself in response to a received signal from a

secondary station (SS1), and at least one secondary station (SS1) having signal transmitting and receiving means (RX1 - RX4), a plurality of antennas (SA1 - SA4), means (18) for monitoring its radio environment and for transmitting a signal including information about its radio environment, and means (18) for configuring its receiver resources (RX1 - RX4) for processing data signals received from the adapted primary station (PS1) and interference by using some of the receiver resources designed to receive transmissions for the purpose of interference cancellation and by choosing selected ones of said plurality of its antennas (SA1-SA4).

11. (original) A system as claimed in claim 9, characterised in that the monitoring means (18) comprises means (18) for determining the transfer functions of the radio paths between the primary station and secondary stations.

12. (currently amended) A secondary station (SS1) for use in a packet data transmission system comprising:

a primary station (PS1) having a plurality of antennas (PA1 - PA4) and signal transmitting (TX1 - TX4) and receiving means, the secondary station (SS1) having signal transmitting and receiving (RX1 - RX4) means, a plurality of antennas (SA1 - SA4) and means (18) for monitoring its radio environment and for transmitting a signal including information about its radio environment, and means (18) for configuring its receiver resources (RX1 - RX4) for processing received data signals and interference by using some of the receiver resources designed to receive transmissions for the purpose of interference cancellation and by choosing selected ones of said plurality of its antennas (SA1-SA4).

13. (cancel)